

## RIVER BIRCH

*Betula nigra* L.

plant symbol = BENI

Contributed By: USDA, NRCS, National Plant Data Center



Robert Mohlenbrock  
Midwestern Wetland Flora  
USDA, NRCS, Wetland Sciences Institute  
@ PLANTS

### Alternative Names

Japanese red birch, black birch, red birch, water birch

### Uses

**Economic:** River birch sap can be fermented to make birch beer or vinegar. The wood is used to manufacture inexpensive furniture, woodenware, wooden shoes, basket materials, toys, staves, and fuel.

**Ethnobotanic:** The leaves were chewed, or used as an infusion in the treatment of dysentery. An infusion of the bark was used to treat stomach problems and difficult urination (Moerman 1998).

**Landscaping & Wildlife:** *Betula nigra* is a very attractive ornamental tree. It is a desirable specimen for estates, golf courses, parks, and public grounds. Many species of birds eat the seeds including wild turkey and grouse. The leaves are browsed by white-tailed deer.

**Conservation:** River birch is used for strip mine reclamation and erosion control (Grelen 1990). It is used in forested riparian buffers to help reduce stream bank erosion, protect water quality, and enhance aquatic environments.

### Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's

current status, such as, state noxious status and wetland indicator values.

### Description

**General:** Birch family (Betulaceae). River birch is a deciduous medium to large-sized native tree. The leaves are alternate, double serrated, wedge-shaped, and sharp pointed. The flowers are unisexual, borne in separate male and female catkins on the same tree. The bark is light brown to buff, paperlike; exfoliating on young trees, turning to scaly bark on older trees.

**Distribution:** River birch is distributed throughout North America. It extends from southern New England, west to Kansas and Minnesota, and south to Texas and Florida. For current distribution, please consult the Plant profile page for this species on the PLANTS Web site.

### Adaptation

River birch can survive on drier soils, although it is best adapted to moist soils and is usually found along stream banks and in swampy bottomlands that are periodically flooded. Maximum development is reached in fertile areas with a pH of 6.5 to 4.0. It is intolerant of shade and requires full sunlight.

### Establishment

**Propagation by Seed:** Sow seeds in containers or seed trays containing a seed germination medium to which a slow release fertilizer is added. Firm the medium and sow seeds thinly and evenly on top, and cover to desired depth with planting medium (Heuser 1997). Place pots in a sunny location in a cold frame. When seedlings are large enough to handle they should be placed into individual pots and grown in a cold frame for their first winter.

### Management

Fertilize young trees in late winter before new growth begins to ensure faster growth. Don't prune this birch and other birches until summer because they are "bleeders" and should not be cut when the sap is flowing.

River birch is quite disease resistant but has severe problems in early spring with aphids and is favored by gypsy moth larvae.

### Cultivars, Improved and Selected Materials (and area of origin)

Readily available through commercial nurseries.

### References

Britton, N.L. 1908. *North American trees*. Henry Holt & Company, New York, New York.

Coombes, A.J. 1992. *Eyewitness handbooks: trees*. Dorling Kindersley, Inc., New York, New York.

Dirr, M.A. 1997 *Dirr's hardy trees and shrubs: an illustrated encyclopedia*. Timber Press, Inc., Portland, Oregon.

Dirr, M.A. 1990. *Manual of woody landscape plants: their identification, ornamental characteristics, culture, propagation, and uses*. 4<sup>th</sup> ed. Stipes Publishing Co., Champaign, Illinois.

Great Plains Flora Association 1986. *Flora of the great plains*. University Press of Kansas, Lawrence, Kansas.

Grelen, H.E. 1990. *Betula nigra*. Silvics of North America. Volume 2. Hardwoods. United States Department of Agriculture. Agriculture Handbook 654, Washington, D.C.

Grimm, W.C. 1967. *Familiar trees of America*. Harper & Row, Publishers, New York, New York.

Grimm, W.C. 1983. *The illustrated book of trees*. Stackpole Books, Mechanicsburg, Philadelphia, Pennsylvania.

Heuser, C.W. 1997 *The complete book of plant propagation*. The Taunton Press, Newtown, Connecticut.

Harrar, E.S. & J.G. Harrar 1962. *Guide to southern trees*. 2<sup>nd</sup> ed. Dover Publications Inc., New York, New York.

Lyon, H.H. & W.T. Johnson 1988. *Insects that feed on trees and shrubs*. 2<sup>nd</sup> ed. Cornell University Press, Ithaca, New York.

Moerman, D. 1998. *Native American ethnobotany*. Timber Press, Oregon.

Odgenwald, N.G. & J.R. Turner. *Plants for the south: a guide for landscape design*. Claitor's Publishing Division, Baton Rouge, Louisiana.

Preston, R.J. Jr. 1948. *North American trees*. 2<sup>nd</sup> ed. The Iowa State College Press, Ames, Iowa.

Sargent, C.S. 1933. *Manual of the trees of North America*. The Riverside Press, Cambridge, Massachusetts.

Rosendahl, C.O. 1955. *Trees & shrubs of the upper midwest*. University of Minnesota Press, Minneapolis, Minnesota.

### **Prepared By**

*Jammie Favorite*

formerly, USDA, NRCS, National Plant Data Center  
Baton Rouge, Louisiana

### **Species Coordinator**

*Lincoln M. Moore*

USDA, NRCS, National Plant Data Center  
Baton Rouge, Louisiana

Edited: 10jan02 jsp

For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>>.

*The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).*

*To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.*